

Claims

5

1. One-sided mat, sealable, biaxially oriented and coextruded polyester film with at least a base layer B containing at least 80% by weight of a thermoplastic polyester, a sealable cover layer (A) and a mat cover layer (C), wherein
 - a) the sealable cover layer (A) has a minimum sealing temperature of less than 120 °C, a seal seam strength of at least 1.0 N/15 mm film width, a maximum R_a -value of 100 nm and a surface gas-flow within the range from 20 to 4000 s;
 - b) the mat cover layer (C) has a maximum gloss of 100, a minimum R_a -value of 150 nm and a surface gas-flow value within the range from 0 to 80 s and
 - c) the haze is below 50%.
2. Polyester film as claimed in claim 1, wherein the sealable cover layer (A) contains an amorphous copolyester, which is made of ethylene terephthalate, ethylene isophthalate and ethylene glycol units.
3. Polyester film as claimed in claim 2, wherein the amorphous copolyester of the sealable cover layer (A) contains an amount of 40 to 95 mol-% of ethylene terephthalate and an amount of 60 to 5 mol-% of ethylene isophthalate.
4. Polyester film as claimed in claim 1, wherein the sealable cover layer (A) has a thickness within the range from 0.2 to 3 μm .
5. Polyester film as claimed in claim 1, wherein the sealable cover layer contains an amount of 0.01 to 1% by weight of anti-blocking agents.

10

15

20

25

30

6. Polyester film as claimed in claims 1, wherein the sealable cover layer (A) has a coefficient of friction against itself of ≤ 1.0 .

7. Polyester film as claimed in claim 1, wherein the cover layer (C) contains particles with an average diameter, expressed as d_{50} -value, of $\geq 1 \mu\text{m}$, and in an amount within the range from 0.5 to 20% by weight, based on the weight of the cover layer (C).

8. Polyester film as claimed in claim 1, wherein the cover layer (C) contains, apart from polyethylene terephthalate homopolymer or polyethylene terephthalate copolymer, an additional polymeric component I, which consists of the condensation product of the following monomers, respectively the derivatives thereof, capable of forming polyesters:

- a) 40 to 99 mol-% of isophthalic acid;
- b) 0 to 60 mol-% of at least one aliphatic dicarboxylic acid with the formula $\text{HOOC}(\text{CH}_2)_n\text{COOH}$, where n is within the range from 1 to 11;
- c) 1 to 15 mol-% of at least one sulfomonomer, containing an alkali metal sulfonate group attached to the aromatic portion of a dicarboxylic acid;
- d) the stoichiometric quantity of a copolymerizable aliphatic or cycloaliphatic glycol with 2 to 11 carbon atoms, required for the forming of 100 mol% of condensate;

where the indicated percentages each being based on the total quantity of monomers which form component I.

9. Process for the production of a polyester film as claimed in claim 1, by way of coextrusion, wherein the polymers, respectively the polymer mixtures, corresponding to the individual layers of the film (A), (B) and (C), which already contain the optional additives are compressed and liquefied in an extruder, the melts are then simultaneously extruded through a flat film die, and the extruded, multi-layered melt is drawn off

on one or more take-off rolls, where the melt then cools down and solidifies to a pre-film, the pre-film is then biaxially stretched, the biaxially stretched film is thermofixed and optionally corona or flame-treated on the surface layer earmarked for treatment, and wound up thereafter, wherein the longitudinal stretching is performed at a temperature within the range from 80 to 130 °C, and the transverse stretching from 90 to 150 °C, and wherein the longitudinal stretch ratio is within the range from 2.5:1 to 6:1, and the transverse stretch ratio is within the range from 3.0:1 to 5.0:1.

10. Process as claimed in claim 9, wherein, for the thermofixing, the film is kept at a temperature within the range from 150 to 250 °C over a time period of 0.1 to 10 s.
11. Process as claimed in claim 9 , wherein one surface or both surfaces of the film is or are corona- or flame-treated after the thermofixing, where the intensity of the treatment is set such that the resulting tension of the treated surface is ≥ 45 mN/m.
12. Process as claimed in claim 9 , wherein an amount within the range from 10 to 60% by weight of waste material of the film production, based on the total weight of the film, is re-used as recycled material for the extrusion.
13. Packaging material containing a polyester film according to claim 1.

* * * * *